thermally converting said one or more vaporizable noble metals into a vapor; and

depositing said vapor onto a gas permeable support in an amount sufficient to produce a catalytically effective load consisting essentially of said one or more noble metals on said support. --

-- 49. The method of claim 48 wherein at least said depositing occurs in a vacuum. --

-- 50. The method of claim 48 wherein said support is a carbon catalyst support. --

-- 51. The method of claim 49 wherein said support is a carbon catalyst support. --

-- 52. The method of claim 50 wherein said carbon catalyst support comprises a material selected from the group consisting of a carbon filament bundle, reticulated carbon, carbon cloth, and carbon mesh. --

-- 53. The method of claim 51 wherein said carbon catalyst support comprises a material selected from the group consisting of a carbon filament bundle, reticulated carbon, carbon cloth, and carbon mesh.

-- 54. The method of claim 48 wherein said support comprises a membrane comprising a composite of polytetrafluoroethylene comprising impregnated ion exchange media, said composite comprising a thickness of about 1 μm. --

-- 55. The method of claim 49 wherein said support comprises a membrane comprising a composite of polytetrafluoroethylene comprising impregnated ion exchange media, said composite comprising a thickness of about 1 μm. --

-- 56. The method of claim 48 wherein said one or more noble metals comprises one or more metals selected from the group consisting of platinum, gold, silver, palladium, ruthenium, rhodium, iridium. --

-- 57. The method of claim 49 wherein said one or more noble metals comprises one or more metals selected from the group consisting of platinum, gold, silver, palladium, ruthenium, rhodium, iridium. --

-- 58. The method of claim 50 wherein said one or more noble metals comprises one or more metals selected from the group consisting of platinum, gold, silver, palladium, ruthenium, rhodium, iridium. --

-- 59. The method of claim 51 wherein said one or more noble metals comprises one or more metals selected from the group consisting of platinum, gold, silver, palladium, ruthenium, rhodium, iridium. --

-- 60. The method of claim 54 wherein said one or more catalytic components comprises one or more metals selected from the group consisting of platinum, gold, silver, palladium, ruthenium, rhodium, iridium. --

-- 61. The method of claim 55 wherein said one or more catalytic components comprises one or more metals selected from the group consisting of platinum,

gold, silver, palladium, ruthenium, rhodium, iridium. --

-- 62. The method of claim 48 wherein said load comprises less than about 0.3 mg/cm^2. --

-- 63. The method of claim 48 wherein said load comprises less than about 0.2 mg/cm^2. --

-- 64. The method of claim 48 wherein said load comprises from about 0.01 to about 0.2 mg/cm^2. --

-- 65. The method of claim 49 wherein said load comprises less than about 0.3 mg/cm^2. --

-- 66. The method of claim 49 wherein said load comprises less than about 0.2 mg/cm^2. --

-- 67. The method of claim 49 wherein said load comprises from about 0.01 to about 0.2 mg/cm^2. --

-- 68. The method of claim 50 wherein said load comprises less than about 0.3 mg/cm^2.

-- 69. The method of claim 50 wherein said load comprises less than about 0.2 mg/cm^2. --

-- 70. The method of claim 50 wherein said load comprises from about 0.01 to about 0.2 mg/cm^2. --

-- 71. The method of claim 51 wherein said load comprises less than about 0.3 mg/cm^2.

-- 72. The method of claims 51 wherein said load comprises less than about 0.2 mg/cm^2. --

-- 73. The method of claim 51 wherein said load comprises from about 0.01 to about 0.2 mg/cm^2. --

-- 74. The method of claim 54 wherein said load comprises less than about 0.3 mg/cm^2. --

-- 75. The method of claims 54 wherein said load comprises less than about 0.2 mg/cm^2. --

-- 76. The method of claim 54 wherein said load comprises from about 0.01 to about 0.2 mg/cm^2. --

-- 77. The method of claim 55 wherein said load comprises less than about 0.3 mg/cm^2. --

-- 78. The method of claims 55 wherein said load comprises less than about 0.2 mg/cm^2. --

-- 79. The method of claim 55 wherein said load comprises from about 0.01 to about 0.2 mg/cm^2. --

-- 80. The method of claim 48 wherein said one or more noble metals

comprise platinum. --

-- 81. The method of claim 62 wherein said one or more noble metals comprise platinum. --

-- 82. The method of claim 63 wherein said one or more noble metals comprise platinum. --

-- 83. The method of claim 64 wherein said one or more noble metals comprise platinum. --

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-- 84. The method of claim 48 wherein said support is a coating on a carbon cloth, wherein said coating is selected from the group consisting of carbon, a wet proofing material, and a combination thereof. --

-- 85. The method of claim 62 wherein said support is a coating on a carbon cloth, wherein said coating is selected from the group consisting of carbon, a wet proofing material, and a combination thereof. --

-- 86. The method of claim 85 wherein said wet proofing material is polytetra-fluoroethylene.

-- 87. The method of claim 62 further comprising

providing a solid polymer electrolyte membrane; and

disposing said support in ionic communication with said solid polymer electrolyte membrane. --

-- 88. The method of claim 87 wherein

said solid polymer electrolyte membrane has a first side and a second side opposite said first side, and

said method further comprises disposing said support on each of said first side and said second side to produce a membrane electrode assembly.

-- 89. The method of claim 62 further comprising

providing a solid polymer electrolyte membrane; and

disposing said support in ionic communication with said solid polymer electrolyte membrane.

-- 90. The method of claim 89 wherein

said solid polymer electrolyte membrane has a first side and a second side opposite said first side, and

said method further comprises disposing said support on each of said first side and said second side to produce a membrane electrode assembly. --

-- 91. The method of claim 48 wherein said thermally converting comprises converting using electron-beam physical vapor deposition. --

-- 92. A fuel cell electrode produced by a process comprising:

providing one or more vaporizable noble metals;

thermally converting said one or more noble metals into a vapor; and

depositing said vapor onto a gas permeable support in an amount sufficient to produce a catalytically effective load consisting essentially of said one or more noble metals on said support. --

-- 93. The fuel cell electrode of claim 92 wherein at least said depositing occurs in a vacuum. --

-- 94. The fuel cell electrode of claim 93 wherein said support is a carbon catalyst support. --

-- 95. The fuel cell electrode of claim 94 wherein said support is a carbon catalyst support comprising a material selected from the group consisting of a carbon filament bundle, reticulated carbon, carbon cloth, and carbon mesh. --

-- 96. The fuel cell electrode of claim 95 wherein said carbon catalyst support comprises a material selected from the group consisting of a carbon cloth and a coating on a carbon cloth selected from the group consisting of carbon, a wet proofing material, and a combination thereof. --

-- 97. The fuel cell electrode of claim 92 wherein said support comprises a membrane comprising a composite of polytetrafluoroethylene comprising impregnated ion exchange media, said composite comprising a thickness of about 1 μm. --

-- 98. The fuel electrode of claim 92 wherein said one or more noble metals

are selected from the group consisting of platinum, gold, silver, palladium, ruthenium, rhodium, iridium. --

-- 99. The fuel electrode of claim 94 wherein said one or more noble metals are selected from the group consisting of platinum, gold, silver, palladium, ruthenium, rhodium, iridium. --

-- 100. The fuel cell electrode of claim 92 wherein said one or more noble metals comprises platinum. --

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-- 101. The fuel cell electrode of claim 94 wherein said one or more noble metals comprises platinum. --

-- 102. The fuel cell electrode of claim 96 wherein said one or more noble metals comprises platinum. --

-- 103. The fuel cell electrode of claim 97 wherein said one or more noble metals comprises platinum.

-- 104. The fuel cell electrode of claim 96 wherein said wet proofing material is polytetra-fluoroethylene. --

-- 105. The fuel cell electrode of claim 92 wherein said thermally converting comprises converting using electron-beam physical vapor deposition. --

-- 106. The fuel cell electrode of claim 100 wherein, at a cell potential of about 0.6 V, an MEA containing said electrode half cell operating as a cathode yields about

800 mA cm^{-2} or greater. --

-- 107. The fuel cell electrode of claim 101 wherein, at a cell potential of about 0.6 V, an MEA containing said electrode half cell operating as a cathode yields about 800 mA cm^{-2} or greater. --

-- 108. The fuel cell electrode of claim 102 wherein, at a cell potential of about 0.6 V, an MEA containing said electrode half cell operating as a cathode yields about 800 mA cm^{-2} or greater. --

-- 109. The fuel cell electrode of claim 103 wherein, at a cell potential of about 0.6 V, an MEA containing said electrode half cell operating as a cathode yields about 800 mA cm^{-2} or greater. --

-- 110. The fuel cell electrode of claims 106 wherein said electrode comprises an electrocatalytic active area of about 300 cm^2 or greater. --

-- 111. The fuel cell electrode of claims 107 wherein said electrode comprises an electrocatalytic active area of about 300 cm^2 or greater. --

-- 112. The electrode of claims 108 wherein said electrode comprises an electrocatalytic active area of about 300 cm^2 or greater. --

-- 113. The electrode of claims 109 wherein said electrode comprises an electrocatalytic active area of about 300 cm^2 or greater. --

-- 114. A fuel cell electrode comprising a support comprising a deposit

disposed thereon, said deposit comprising a catalytically effective load of an electrocatalyst comprising an electrocatalytic active area at least in part comprising rod-shaped structures. --

-- 115. The electrode of claim 114 wherein said rod-like structures are visible at a magnification of at least about x10k. --

-- 116. The electrode of claim 114 wherein said deposit further comprises particles of said electrocatalyst comprising an outer surface, wherein said electrocatalytic active area comprises a majority of said outer surface of said particles. --

-- 117. The electrode of claim 115 wherein said deposit further comprises particles of said electrocatalyst comprising an outer surface, wherein said electrocatalytic active area comprises a majority of said outer surface of said particles.--

-- 118. The electrode of claim 114 wherein said load comprises less than about 0.3 mg/cm^2. --

-- 119. The electrode of claims 114 herein said load comprises less than about 0.2 mg/cm^2. --

-- 120. The electrode of claim 114 wherein said load comprises from about 0.01 to about 0.2 mg/cm^2. --

-- 121. The electrode of claim 115 wherein said load comprises less than about 0.3 mg/cm^2. --

-- 122. The electrode of claims 115 herein said load comprises less than about 0.2 mg/cm^2. --

-- 123. The electrode of claim 115 wherein said load comprises from about 0.01 to about 0.2 mg/cm^2. --

-- 124. The electrode of claim 117 wherein said load comprises less than about 0.3 mg/cm^2. --

A2 -- 125. The electrode of claims 117 herein said load comprises less than about 0.2 mg/cm^2. --

-- 126. The electrode of claim 117 wherein said load comprises from about 0.01 to about 0.2 mg/cm^2. --

-- 127. The electrode of claims 114 wherein said support has a surface area, and said deposit covers about 300 cm^2 or more of said surface area. --

-- 128. The electrode of claim 118 wherein said support has a surface area, and said deposit covers about 300 cm^2 or more of said surface area. --

-- 129. The electrode of claims 121 wherein said support has a surface area, and said deposit covers about 300 cm^2 or more of said surface area. --

-- 130. The electrode of claims 124 wherein said support has a surface area, and said deposit covers about 300 cm^2 or more of said surface area. --

-- 131. The electrode of claim 114 wherein said electrocatalyst comprises

platinum. --

-- 132. The electrode of claim 118 wherein said electrocatalyst comprises platinum. --

-- 133. The electrode of claim 121 wherein said electrocatalyst comprises platinum. --

-- 134. The electrode of claim 124 wherein said electrocatalyst comprises platinum. --

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-- 135. The electrode of claim 130 wherein said electrocatalyst comprises platinum. --

-- 136. The electrode of claim 130 wherein, at a cell potential of about 0.6 V, an MEA containing said electrode as a half cell operating as a cathode yields a power output of about 800 mA cm^{-2} or greater. --

-- 137. The electrode of claim 131 wherein, at a cell potential of about 0.6 V, an MEA containing said electrode as a half cell operating as a cathode yields a power output of about 800 mA cm^{-2} or greater. --

-- 138. The electrode of claim 132 wherein, at a cell potential of about 0.6 V, an MEA containing said electrode as a half cell operating as a cathode yields a power output of about 800 mA cm^{-2} or greater. --

-- 139. The electrode of claim 133 wherein, at a cell potential of about 0.6 V,

an MEA containing said electrode as a half cell operating as a cathode yields a power output of about 800 mA cm^{-2} or greater. --

-- 140. The electrode of claim 134 wherein, at a cell potential of about 0.6 V, an MEA containing said electrode as a half cell operating as a cathode yields a power output of about 800 mA cm^{-2} or greater. --

-- 141. The electrode of claim 135 wherein, at a cell potential of about 0.6 V, an MEA containing said electrode as a half cell operating as a cathode yields a power output of about 800 mA cm^{-2} or greater.

-- 142. A membrane electrode assembly comprising the fuel cell electrode of claim 114. --

-- 143. A membrane electrode assembly comprising the fuel cell electrode of claim 141. --

-- 144. The fuel cell electrode of claim 114 wherein

said support has a surface area; and,

substantially all of said surface area ionically communicates with an ionomeric membrane.

-- 145. The fuel cell electrode of claim 141 wherein

said support has a surface area; and,